

Beaver County Now One of Utah's Great Copper Districts

Ore Bins and Crushing Department

How Ore is Brought out of Mine

Entrance To Main Tunnel

Big Mill in Which Ores from Cactus Mine are Treated

Samuel Newhouse

Mr. Newhouse's Own Railroad

Type of Buildings, Town of Newhouse

NEVER in the history of Beaver county has the mining situation looked as bright there as it does today. It is rapidly recovering from the effects of the boom of several years ago, when unscrupulous promoters—otherwise "wildcaters"—put the country to the bad. But fortunately this class of operators has been weeded out and Beaver county is undergoing development in a most substantial way. The results of this year's work shows this and the new year will, therefore, dawn under most auspicious skies.

A great many things have happened in Beaver county during the past 12 months which may be said to be of an important character and which cannot do other than inspire confidence in the future of its mineral districts. It can be said that there has been a general mining revival in this portion of the state and while it is creating no unusual excitement, there is, nevertheless, a betterment of conditions noted nearly everywhere where mining is considered as a factor in the county's resources.

CACTUS DEVELOPMENTS.

The most important developments have been made in the property of the Newhouse Mines & Smelters corporation, owner of the Cactus, which is now considered to be one of the greatest copper mines of the west.

The Newhouse company is the largest operating concern in the county. Its activity being conducted upon a broad scale. The mine is equipped splendidly to handle large tonnage economically. The mill is one of the finest ever built in the west and has treated an average of 800 tons of ore per day during the year. Mr. Newhouse recently made the announcement that the capacity of the plant is to be doubled and anticipates that the second unit will be ready for operation within the next four or five months, barring any unforeseen delays. The construction of 40 cottages to make accommodations for the additional men that will be needed and their families, is already in progress. These contemplated improvements are a direct result of the recent mine developments, which caused a sensational rise in the value of the stock and out of which several Salt Lake people, who purchased it before the rise, made comfortable fortunes.

The stock sold around \$1 a few months ago, but at this writing it is in demand around \$20 and is certain to go higher. How much, no one knows, nevertheless the mine is in condition to maintain a high standard of value for many years to come.

STEAM SHOVEL PRACTICE.

The introduction of the steam shovel as a factor in Utah mining is credited to the management of the Newhouse company and early in the present year one of these machines was placed in operation on the Cactus property. At first it was employed in removing overburden from the ore deposits, but when sufficient surface had been stripped it was put to work on ore and at this writing about 40 per cent of the ore sent to the mill is mined in this manner. The shovel is handling between 25,000 and 30,000 tons of material per month, which includes of course, both ore and overburden.

The plan of operation of the steam shovel at the Cactus is no less interesting than it is at the Boston Consolidated and Utah Copper mines in Bingham. All the ore sent to the mill comes out through the main tunnel to the crushing plant and bins. That moved by the steam shovel is dropped down through a shaft to the tunnel level into large chutes where the mine cars are loaded, gravity. The rock is blasted out around the shaft and the procedure eventually forms a gigantic funnel-shaped hole with the interior presenting a surface from which ore can be broken down at a cost of only a few cents a ton. The Cactus is an undertaking of great magnitude and impresses one more when it is understood that in the big ore body of the older portion of the mine the copper values probably average a little less than 2 per cent. Still, under conditions less favorable perhaps than some of the Bingham companies enjoy, the management has made a splendid paying proposition out of it. The advantage in favor of Bingham lies in the fact that the basis of concentration is about 10 tons into one, against from 15 to 20 tons into one in the Cactus.

ever, the values contained in the new Cactus ore body recently developed are so much better than the Bingham ores that the disadvantage is practically overshadowed. Another feature about Cactus ores, which has enabled the management to obtain a favorable contract with the American Smelting & Refining company, is found in the fact that the concentrate produced carries an excess of iron of from 10 to 25 per cent, for which the company receives a premium of 10 cents per unit, or from \$1 to \$2.50 per ton; while concentrate from the Bingham porphyries carries an excess of silica, often as high as 20 per cent, which is penalized correspondingly.

At this time about 100 tons of concentrate are being marked daily, which has a gross valuation, it is said, of about \$60 per ton. This means that the company is realizing from operation of its mill about \$5,000 per day and with the plant's capacity increased and with the shipments of crude ore, attention to which will be paid later, the earnings capacity of this mine can

readily be arrived at. Undoubtedly the Cactus is one of the big copper mines of the country and is good for steady dividends for a long time to come.

EXCESS OF IRON OVER SILICA.

At times the excess of iron has been so great in Cactus concentrate that the smelting charge has been less than \$1 per ton. The cost of the milling Cactus ore has been greatly reduced during the present year, and from a well informed source it is learned that they have been bought down to less than 50

cents per ton. But when the mill is enlarged it will be still further reduced. It formerly cost about 80 cents per ton. There are very few mills, or mines for that matter, operated more economically. The company will close the year with the production of close to 9,000,000 pounds of copper, which has cost probably less than 10 cents per pound. But with present plans carried into execution the company should be able to produce between 20,000,000 and 26,000,000 pounds annually.

The town of Newhouse is a model. If

other western mining camps were built on the same plan, there would probably be less shifting about among miners and other mine employees. Everything has been done there to promote the interests of the inhabitants. The company has erected many modern cottages for employees to live in; Mr. Newhouse went down into his pocket and provided funds for a public school and Y. M. C. A. building, and has paid nearly all the taxes for its maintenance. There are no saloons in the camp at all, and none will be permitted to run with-

in the Newhouse townsite. However, a club house is in existence where liquors are dispensed, but only under most stringent regulations. As a result, perfect order and decorum among the company's employees is the order of the day. One of the rules of the club house, and an infringement will not be tolerated, abolishes the custom of one person treating another.

MILFORD, DISTRIBUTING PORT.

Milford is the chief distributing point for all the mining camps of Beaver county, and next to Beaver the county seat, is the largest town. In the vicinity of the Cactus, the owners of the Indian Queen property have made satisfactory progress. Over on the eastern side of the San Francisco range of mountains and near the old time mining town of Frisco, conditions have changed very much for the better. The management of the famous Horn Silver mine widened its scope of development, and has succeeded in opening up some bonanza ore bodies which have added many years to the life of that property. The Lulu Mining company, which owns a group of claims

covering a south extension of the Horn Silver lode, has developed a great deal of ore and is prepared to start this year as a shipper. In exactly the opposite direction is situated the location of the Frisco Contact Mines company and which take in an extension of the Horn Silver vein. This corporation is carrying on a very vigorous campaign and it will also inaugurate high grade ore shipments in 1907. Even around Milford, particularly in the Star districts, much telling development work has been done, resulting in the opening of several new shipping mines. Among them is the Cedar, owned by a Salt Lake company, in which some exceptionally rich silver-lode ore has been found. The Talcott, controlled by P. B. McKee of Salt Lake, has improved wonderfully and has been quite a regular contributor of ore to the Salt Lake markets for several months; the Barnum, owned by Mathew Cullen, is another property that has made a very good account of itself; the Kibbi, Mining company has been operating in mine and mill intermittently with very favorable results, while the Harbottle & Hickory mine, one of the units of the Majestic Copper Mining & Smelting company, has been growing better and better as development has progressed.

A good many shipments have been made from the Majestic property during the past six months and while the writer does not have exact information at hand, it is known that the ore has netted the company enough to considerably more than keep up the interest on its outstanding bonds in addition to meeting operating expenses. While the Majestic company has done a great deal of development work in the O. K. copper mine, another one of its units, on its own account, leaseholders have opened new ore bodies and made shipments to Salt Lake smelters, but nothing has been said so far that they have not had occasion to regret having taken their lease.

BEAVER LAKE DISTRICT.

North of the O. K. mine and in the Beaver Lake district, the Skylark Copper has made good progress although its operations have been limited, the management having been handicapped by a small defective fund. However, it is making headway with mine conditions presenting a favorable situation at the present time. Some activity has been witnessed at the Skylark. The Black Rock Copper company has found ore in a property and will likely ship within the next few months. Down in the extreme southwestern part of Beaver county is the Pine Grove mining district. Here the Revenue Mining company, controlled by some of the prominent citizens, which patents land group claims for ore, has had one operating in the district and has developed some extensive prospects. A mill was erected just about a year and at this writing is about ready to go into commission.

Some prospecting and development work has been done in some of the districts to the east of Milford in a desultory sort of way, but nothing has transpired there of especial importance.

LULU GETS ORE.

The operations at the Lulu mine, which, as stated in the foregoing, is located near the Horn Silver vein, have been watched with a great deal of interest during the year. This company, the Lulu Mining company, has been conducting a very energetic campaign of development, its bodies showing opening of some good ore. Following these disclosures, the management has inaugurated a plan of work along broader lines. The ore was encountered on the 450 level and undoubtedly is an extension of the original Horn Silver vein. In addition to doing development and blocking out ore for future shipment, the Lulu company is driving to connect the Lulu company of the Horn Silver vein with the workings of the mine venting system as well as a matter of fact, for employees in either property. No doubt the Lulu will make extensive shipments during 1907.

FRISCO CONTACT MINES.

The Frisco Contact is another property which seems destined to become one of the big mines of Beaver county. It is in the same direction as the Lulu. Mr. D. P. Rohlfing, officiating as manager, is a man of high rank in the profession and a successful mine engineer, as well as a successful manager. The Frisco Contact is 500 feet deep and at that level a drift is being run through a large body of copper ore.

All in all, conditions at the Frisco Contact mine are satisfactory. It is an extension of the Horn Silver vein on the north, and the reason to believe that it will develop into a bonanza equally as great as the original Horn Silver. The mine is splendidly equipped, the company has expended considerable expense during the present year in producing new machinery.

Gold Springs, One of the New Camps of the Year.

TO THE Christmas "News" is due much of the credit for the establishment of a new mining camp in Utah during the past year—the town of Gold Springs in the western part of Iron county, near the Utah-Nevada boundary line. A year ago, C. A. Short, who held large interests around the present site of Gold Springs, was the special representative of the Christmas "News" in Nevada and covered the state from Reno to Las Vegas, in its interests. His study of the wonderful camps of Tonopah, Goldfield and Rhyolite only served to impress him more with the merits of his own district and make him more enthusiastic over its possibilities and a knowledge of the methods of promotion used by the hustlers of the big camps, stimulated him to action in the interests of the properties under his control. As soon as the big 1905 Christmas "News" had gone to press, Mr. Short returned to camp, and with H. R. Elliott, his partner in the famous Snowflake property, commenced to get busy. Plans were at once made to promote the Jennie Mining company and incorporate and develop the Nevada property.

RAISED MONEY IN IOWA.

Mr. Elliott at once left for the east to raise the necessary money. He went among friends in Iowa and Illinois and soon succeeded in selling enough treasury stock to put a small force of men to work on both properties. For nine months, Mr. Elliott remained in the east and succeeded in disposing of enough of the treasury stock of the Jennie company to develop it into the big mine that it is today. Mr. Short took charge of the development work at the mine and their combined efforts have resulted in putting new life into a neglected portion of the state, developing a wonderful mine and establishing a thriving new camp.

LOCATION OF GOLD SPRINGS.

Gold Springs is situated 14 miles west of the Nevada line, the last station in Utah on the San Pedro, Los Angeles & Salt Lake railroad. The first of May last the country for several miles around did not have a half dozen men at work and over 100 people received mail through a recently established postoffice. It is connected with Modena by a daily stage, has a good Gold Springs Mercantile company. The townsite is surveyed and lots have been selling rapidly during the past month. The town has become the center of the entire mining region between Modena and Pioche.

FORMATION OF DISTRICT.

The formation of the country around Gold Springs, especially at the Jennie and Snowflake properties, is very similar to the Bullfrog country. The country rock is principally porphyry, with dykes of rhyolite and andesite. The veins are very numerous and are of two varieties. One set has a north-westerly trend—about 20 degrees west of north and the other a northerly and southerly course. The former are the older veins, and so far as developed yield the best values. The gangue quartz carrying about 12 per cent lime as a lime spar, while in the other or later ledges, the lime spar predominates. The veins are all fissures, clear cut and well defined, at 120 feet in depth in the Jennie both foot and hanging walls are smooth as boards and separated from the ore body as though cut with a knife.

THE JENNIE PROPERTY.

The Jennie property consists of nine claims and adjoins the Snowflake group lying in Nevada in the Eagle valley mining district, Lincoln county. The claims are cut with numerous ledges carrying values from a few dollars up into the hundreds and varying in width from a foot to 15 feet. The principal workings are on the Matine ledge, and the main shaft is situated about 60 feet from the Utah-Nevada boundary line. On the surface, this ledge carries 30 values for a width of from eight to ten feet. It has some streaks of very high grade stuff from which considerable shipping ore has been extracted. The main shaft was sunk to the east of the ledge and encountered it at a depth of 75 feet. In passing through it 23 feet of ore was cut varying in value from \$8 to \$38 at 15 feet, a crosscut was run to the ledge and 15 feet of ore uncovered. About four feet of this gave values better than \$10 and the balance, or 12 feet seven inches, by a recent expert sample has a value of 12.40 ounces silver and \$40 in gold, or a total value of \$49.35.

Drifts have been run both north and

south on this level, aggregating over 120 feet, and different samplings of the entire width of the drift—from six to eight feet, have varied from \$9 to \$34.

BIG ORE BODY.

The body of ore is 120 feet deep on the dip and from the development work done on the ledge enough ore has been extracted to pay for the mill now being erected. A number of samples were taken recently by one of Salt Lake's best known experts from the surface and the underground openings, and the average of the whole was \$22.55. The vein crops on the surface in the Jennie ground for a distance of about 700 feet. On this portion of the ledge alone expert measurements place 40,000 tons of ore in sight. With several other large ledges yet to be developed, it is not difficult to see that the Jennie is a mine of no small magnitude and of wonderful possibilities.

MILLING ORE IN SIGHT.

With so large a body of high grade milling ore in sight, the company recently decided to place a small mill upon the property and placed an order with Fairbanks-Morse & Co. for a 20-ton Nissen stamp mill. It will be first class and up-to-date in every respect, and guaranteed by the builders to be a

model mill. The water for the mill is secured through a 3,000 ft. pipe line from Gold Springs, where a pumping plant has been installed. The ore is a perfect amalgamating and cyaniding ore, but at present only amalgamation will be employed. By this method it is expected that 75 per cent of the values will be saved. During the coming summer it is expected that the mill will be doubled in capacity and a cyanide plant installed. The mine is equipped with a 40-horse power gasoline engine, which will carry on operations to a depth of 800 feet. Sinking is now progressing to the 200 foot level and by the time the mill starts, which is expected to be about the first of February, the vein will be opened at that depth.

A UTAH CORPORATION.

The Jennie Gold Mining company is a Utah incorporation, with 500,000 shares of the par value of 10 cents each. F. R. Davis is president; C. A. Short, vice president and manager; W. V. Eason, secretary and treasurer; and they, with H. R. Elliott and A. E. Short, form the board of directors. Outside of the treasury stock, placed in Iowa and Illinois, by Mr. Elliott, the stock is closely held and commands a good, stiff price, when any is transferred. The management is conservative.

NEW ORE BODIES IN THE CARISA.

(Continued from page twenty-one.)

W HILE other Tintic mines have recorded important developments as a result of this year's work, none of them have made better progress in the right direction than the Carisa, owned by the Carisa Gold & Copper company. In fact, sensational disclosures have been made in this property which is undoubtedly destined to become one of the big producers and dividend payers of the camp. It is a "bread getter" now, for during the greater part of the present year shareholders have participated in the receipts of dividends to the aggregate of \$5,000 monthly.

Shareholders of the Carisa are fortunate, indeed, in having for their manager a man who knows the geology of the Tintic district as well as any other man interested in it, namely, H. S. Joseph.

It has been the policy of Mr. Joseph, as it is with every other thorough mining man, to surround himself with a strong corps of assistants with whom he can consult from time to time. With a talented staff ready to carry out instructions, the management rests in the satisfaction of knowing that the interests of shareholders are always being carefully safeguarded.

No better evidence of this is found than in the opening, recently, of an important ore body on the 300-level of the Carisa mine, from which the company has been drawing out lately for quite extensive shipments. Assays taken from this shoot show the ore to contain from one-half to 20 ounces in gold, 20 to 25 ounces in silver and from 3 to 8 per cent copper. This particular ore body is from 3 to 12 feet in thickness, and has been followed for more than 500 feet, exposing, as can be seen by the foregoing, a tremendously large body. Not only has the 300 level responded generously, but highly gratifying results have come from exploratory work done on the 250, 400, and 500 levels, where interesting copper, gold, silver and lead values have been obtained, with a large tonnage of ship-

ping as well as mill ore blocked out. The extension of the Dawson tunnel, which is now in progress, will also add materially to the value of the property, as it will soon encounter a known ore body, and a larger one, too, carrying average values of about \$15 a ton.

But it can be said that in nearly every part of the property where work has been done, results have been satisfactory and bringing a great deal of close touch with progress in the Tintic district and are in position to know what has been done at the Carisa in particular, are free to state that this property is rapidly advancing to a high rank among the great mines of the Tintic district. As has been the case in several other well known mines of the camp, development at depth has demonstrated the continuity of the ore deposits of this wonderful district of Juab county.

THE WEST MAMMOTH.

The West Mammoth, owned by Captain Hugo Deprezin of Eureka, and the McKinley Mining company's property, have both come in for a great deal of development work this year. Both groups are to the west of the Centennial Eureka mine, and it is the opinion of many well known mining men that the rich ore zone of the Centennial Eureka extends through this ground. Captain Deprezin's ground was worked this year under a lease and bond held by Captain Singmaster of Chicago, who is one of the principal owners of the American Flag ground at Park City. After doing a great deal of development work, Captain Singmaster was forced to relinquish the bond because his falling health would not permit him to give the matter his personal attention. It is generally understood that Captain Deprezin has had a very flattering offer for the ground from the Centennial Eureka people, who are anxious to expand their boundaries.

The McKinley Mining company is purely a local corporation. Well known local people secured control of a con-

ple of claims and then got a bond upon some other claims adjoining and found some other claims adjoining and formed a company which has been working continuously during the past eighteen months. A short time ago staking was started from the tunnel level, and the company has made arrangements for the purchase of new machinery with which to carry on this work.

RAYMOND-ILLINOIS SHOWING.

The development of the Raymond-Illinois property has been going on uninterruptedly for the past year under the able supervision of J. C. Sullivan, the well known and successful mining man of Eureka. The showing upon the 1,500 foot level where drifting is now going on, is exceptionally good, and there is every reason to believe that another shipper will soon be added to the already large list in Tintic. The Raymond-Illinois is north of and adjoining the Gemini and Ridge and Valley, both of which are now shipping actively and bringing a great deal of money into the pockets of the fortunate stockholders. If the ore is opened up in the Raymond-Illinois, it will certainly be sufficient proof that the main ore zone of Tintic, that of the Centennial Eureka-Eureka Hill-Bullion Beck-Gemini, extends northward, and for this reason the development of this property is being eagerly watched.

THE STAR CONSOLIDATED.

New Machinery has been installed at the Star Consolidated within the past few months and Supt. J. P. Turner says that the mine never looked better at present.

IN CONCLUSION.

A complete history of the year at the more space than is at the command of the writer, and as a result many mines have come in for but scant mention upon this page. There are also scores of smaller properties that are not mentioned at all in these columns, but from what has been said the reader can see that the Tintic district has made wonderful strides forward during the past year.

and with a faith that the Jennie has few equals as a gold mine, intends to develop it for the best interests of every stockholder.

The new year will start the Jennie company off with a fully equipped mine, a model mill, immense ore reserves, a clean balance sheet, and a prospect that few properties possess.

THE UVADE.

The Uvade Gold Mining company is another Short and Elliott property. It adjoins the Jennie and part of the Snowflake group on the north, and carries the extension of the ledges that is making these properties bonanzas. The company was incorporated in February last with four claims as a basis and has been financed by Short & Elliott. A tunnel has been run a distance of 340 feet and it is expected that the shaft level will be cut in about 200 feet more. Work is progressing steadily to that end. Eight known ledges should be cut by the tunnel in the next 600 feet of work and with a working shaft 35 feet and on these ledges, the Uvade will be second to none in the camp as a producer. The tunnel will cut the Jennie ledge about 500 feet north of the present workings on that property.

The company is incorporated for 600,000 shares of the par value of 25 cents each. F. R. Davis is president, C. A. Short, vice president and manager, and H. R. Elliott, secretary and treasurer.

THE SNOWFLAKE.

The big Snowflake property lies to the west of the Jennie, in Nevada, and has not been operated during the past year except for the performance of assessments of interest of \$100,000. It is still hung up with litigation, and the probabilities are that it will remain so for some time. A deal was on for the promotion of the Buck Mountain claims of the Snowflake, recently controlled by G. Pray Smith, but it has not yet been consummated, due to the fact that the litigation cannot be quieted. Mr. Smith now has a force of men doing the assessment work. On the Snowflake No. 5 a rich vein has recently been opened up. S. P. Moore and C. O. Newell have a bond and lease on a one-third interest belonging to George Moody, in two claims. They have put down a shaft 35 feet and have about eight feet of ore running better than \$15, and resembling very much the Jennie ore.

The Utah Stateline Mining Co. is a new concern to enter the Gold Springs country. It is a California company, and is under the management of Geo. Paxman, formerly of Silver City, Utah. It owns the Jumbo property, and is now running a tunnel to cut the several ledges in the group. The Interstate Mining & Reduction company, owning the Amethyst-Wild Irish group, has been doing nothing this year on account of "family" troubles, but these are now being adjusted, and the new year will place it a close rival to the Jennie.

ACTIVITY AT FAY.

At Fay, which is about four miles west of Gold Springs, an attempt was made again this year to revive the Hornsby property, but it was a failure, owing to bad management. This property is a valuable one and has suffered from two attempts to run it with a management inexperienced and inefficient. During the coming spring it will be reopened with an able, competent man in charge, and will no doubt fulfill all the expectations of the owners.

Deer Lodge and Stateline have been inactive except in "spits" during the year. The Homestake mill was in operation for a month or two and made a successful run. The Big 14 group at Stateline has been worked under lease by Lou Higbee and has produced some sensational ore. It is now under bond to Salt Lake parties.